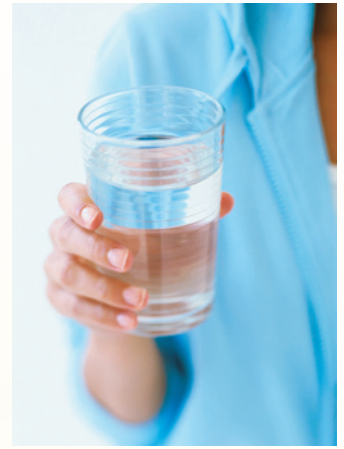


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Meeting the Challenge

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2011. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please share with us your thoughts or concerns about the information in this report. After all, well-informed customers are our best allies. If you are aware of non-English speaking individuals who need help with the language translation of this report, you may contact our Public Works Director, Barry D. Johnson, P.E., at (701) 433-5400. If you own or manage an apartment complex or business in the city, please share this report with your tenants.



If you have a question regarding the City of West Fargo's drinking water, feel free to call our Public Works Director, Barry D. Johnson, P.E., at (701) 433-5400 or at email address barry.johnson@westfargond.gov.

City Commission Meetings

The city commission meets on the first, third, and fifth Monday of each month and is open to the public for input or questions.

Where Does My Water Come From?

The city uses ground water entirely. The water is obtained from the West Fargo Aquifer through eight production wells which are located throughout the city. The water is pumped directly into the distribution system at each site. Three elevated tanks with a capacity of 500,000 gallons each, and one with a capacity of 1,500,000 gallons, not only provide storage, they also create the constant water pressure in your home and serve as a pressure relief on the pipeline for the eight well-pumps situated throughout the city.

The total pumping capacity is approximately three thousand five hundred (3,500) gallons a minute or five million (5,000,000) gallons a day. The average well depth is two hundred twenty-five (225) feet. Water treatment is accomplished at each site by adding chlorine (disinfectant), fluoride (for strong teeth and bones), and phosphate (for corrosion and red water control).

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water, to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it can acquire naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include: Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; Pesticides and Herbicides, which may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses; Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems; Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Fact or Fiction

Tap water is cheaper than soda pop. (*Fact: You can refill an 8 oz. glass of tap water approximately 15,000 times for the same cost as a six-pack of soda pop. And, water has no sugar or caffeine.*)

Methods for the treatment and filtration of drinking water were developed only recently. (*Fiction: Ancient Egyptians treated water by siphoning water out of the top of huge jars after allowing the muddy water from the Nile River to settle. And, Hippocrates, known as the father of medicine, directed people in Greece to boil and strain water before drinking it.*)

A typical shower with a non-low-flow showerhead uses more water than a bath. (*Fiction: A typical shower uses less water than a bath.*)

Water freezes at 32 degrees Fahrenheit. (*Fiction: You can actually chill very pure water past its freezing point (at standard pressure) without it ever becoming solid.*)

The Pacific Ocean is the largest ocean on Earth. (*Fact: The Atlantic Ocean is the second largest and the Indian Ocean is the third largest.*)

A single tree will give off 70 gallons of water per day in evaporation. (*Fact*)

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Hydrant Flushing

The City of West Fargo flushes hydrants twice a year, in the spring and in the fall. We urge you to limit your water usage when we are in your area, especially in the washing of clothes, as the water may become discolored during the flushing process. We notify the media (TV, radio, and newspaper) with our flushing dates and times. It is also on our Web site at <http://www.westfargond.gov>.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

Source Water Assessment and Its Availability

Our public water system, in cooperation with the North Dakota Department of Health, has completed the delineation and contaminant/land use inventory elements of the North Dakota Source Water Protection Program. Based on the information from these elements, the North Dakota Department of Health has determined that our source water is moderately susceptible to potential contaminants. You may review or get a copy of the completed assessment at the Public Works Office, 810 12th Ave. NW, West Fargo, North Dakota.



Who uses the most water?

On a global average, most freshwater withdrawals—69 percent—are used for agriculture, while industry accounts for 23 percent and municipal use (drinking water, bathing and cleaning, and watering plants and grass) just 8 percent.

How much water does a person use every day?

The average person in the U.S. uses 80 to 100 gallons of water each day. During medieval times a person used only 5 gallons per day.

Should I be concerned about what I'm pouring down my drain?

If your home is served by a sewage system, your drain is an entrance to your wastewater disposal system and eventually to a drinking water source. Consider purchasing environmentally friendly home products whenever possible, and never pour hazardous materials (e.g., car engine oil) down the drain. Check with your health department for more information on proper disposal methods.

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state allows us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic ¹ (ppb)	2010	10	0	5.22	ND–5.22	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2011	2	2	0.19	0.0441–0.19	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2011	[4]	[4]	3.4	3.1–3.5	No	Water additive used to control microbes
Cyanide (ppb)	2007	200	200	18	NA	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	2011	4	4	0.67	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2011	60	NA	7	NA	No	By-product of drinking water disinfection
Nitrate (ppm)	2011	10	10	0.09	ND–0.09	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2011	50	50	4.6	2.17–4.6	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
TTHMs [Total Trihalomethanes] (ppb)	2011	80	NA	17	NA	No	By-product of drinking water disinfection
Tap water samples were collected for lead and copper analyses from sample sites throughout the community							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH% TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2010	1.3	1.3	0.532	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2010	15	0	0	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

OTHER UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
ALKALINITY,TOTAL (ppm)	05/25/2011	351	n/a–n/a	NA
BICARBONATE AS HCO ₃ (ppm)	05/25/2011	428	n/a–n/a	NA
CALCIUM (ppm)	05/25/2011	64.4	n/a–n/a	NA
CHLORIDE (ppm)	05/25/2011	168	n/a–n/a	NA
CONDUCTIVITY@25 C UMHOS/CM (umho/cm)	05/25/2011	1480	n/a–n/a	NA
HARDNESS,TOTAL(AS CaCO ₃) (ppm)	05/25/2011	255	n/a–n/a	NA
IRON (ppm)	05/25/2011	6.38	n/a–n/a	NA
MAGNESIUM (ppm)	05/25/2011	22.9	n/a–n/a	NA
MANGANESE (ppm)	05/25/2011	0.174	n/a–n/a	NA
NICKEL (ppm)	05/25/2011	0.00173	ND–0.00173	NA
PH (PH Units)	05/25/2011	7.28	n/a–n/a	NA
POTASSIUM (ppm)	05/25/2011	6.1	n/a–n/a	NA
SODIUM (ppm)	05/25/2011	215	n/a–n/a	NA
SODIUM ADSORPTION RATIO (obsvns)	05/25/2011	5.85	n/a–n/a	NA
SULFATE (ppm)	05/25/2011	178	83–178	NA
Total Dissolved Solids (TDS) (ppm)	05/25/2011	828	n/a–n/a	NA
ZINC (ppm)	05/25/2011	0.576	n/a–n/a	NA

¹While your drinking water meets the U.S. EPA's standard for arsenic, it does contain low levels of arsenic. The U.S. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

obsvns: Observations/field at 100 Power

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

umho/cm: A unit expressing the amount of electrical conductivity of a solution.